

-----  
Mauna Loa Solar Observatory Observer's Log  
-----

Wed May 21 16:33:39 GMT 2003

Year: 03 Doy: 141

Observer: yasukawa

WEATHER COMMENT: Wed May 21 16:33:43 GMT 2003

Cool, in cirrostratus deck, southeast wind.

\*\*PSPT PROBLEM\*\*: Wed May 21 16:35:21 GMT 2003

New motor not overcoming initial torque requirements, dome not opening.

Wed May 21 16:42:51 GMT 2003 CHIP Start Patrol

Wed May 21 16:43:02 GMT 2003 PICS Start Patrol

Wed May 21 16:43:54 GMT 2003 MKIV Start Patrol

Wed May 21 16:50:09 GMT 2003 MKIV End Patrol

\*\*MKIV PROBLEM\*\*: Wed May 21 16:48:43 GMT 2003

When I opened up and pointed the spar, I noticed a wisp of smoke coming from area near the O1 guiders/modulator. Sniffed around and did not detect burned electronics but smell was more like burning organic material, like hair or a bug. Decided to start up and investigate further. MK4 scans started up with missing inner "corona" -- a great clue.

Upon looking at the slots, I see an incinerated moth right on the slot.

Stopped scan to work on removing debris.

\*\*MKIV PROBLEM\*\*: Wed May 21 17:01:41 GMT 2003

Removed O1 guider sensor assembly and vacuumed incinerated moth. Looked like it was in the wrong place when I pointed the spar at the sun.

MKIV COMMENT: Wed May 21 17:03:12 GMT 2003

Centered O1 before starting up scans.

Wed May 21 17:03:39 GMT 2003 MKIV Start Patrol

WEATHER COMMENT: Wed May 21 17:07:22 GMT 2003

Out of structured cirrostratus deck but sky is a bit bright near sun.

\*\*MLSO PROBLEM\*\*: Wed May 21 17:10:47 GMT 2003

Unable to access email on POP server this morning.

Trace route fails at 128.116.254.240, UCAR gateway, I think.

Wed May 21 18:00:46 GMT 2003 CHIP LSD

Wed May 21 18:02:41 GMT 2003 CHIP End LSD

Wed May 21 18:02:49 GMT 2003 CHIP BiasLSD

Wed May 21 18:03:42 GMT 2003 CHIP End BiasLSD

Wed May 21 18:03:47 GMT 2003 PICS Flat

Wed May 21 18:04:01 GMT 2003 CHIP Bias

Wed May 21 18:05:01 GMT 2003 CHIP End Bias

Wed May 21 18:06:24 GMT 2003 PICS End Flat

MKIV COMMENT: Wed May 21 18:15:04 GMT 2003

Centered O1.

\*\*PSPT PROBLEM\*\*: Wed May 21 18:38:16 GMT 2003

Checking out two possibilities--mechanical overload or low voltage.

I can feel binding every two turns of the manual hook. I backed the motor away from the gearbox coupling and tried the hook again. I can still feel

the binding. With the motor backed off, I still cannot get the motor to run either direction. This situation points to three possible conditions-- motor burned out again, although there is no indication of overheating and I don't think either Darryl or I let the motor run in stall condition for very long; motor is wired incorrectly, new motor wiring is not the same as old motor wiring, although Darryl indicated he figured it out yesterday; voltage is low due to possible damage to switch next to motor.

MKIV COMMENT: Wed May 21 19:18:32 GMT 2003

Centered O1.

Wed May 21 19:18:47 GMT 2003 CHIP End Patrol

COMMENT: Wed May 21 19:19:06 GMT 2003

Stopping to reconfigure dome shutter.

Wed May 21 19:19:27 GMT 2003 PICS End Patrol

Wed May 21 19:22:19 GMT 2003 MKIV End Patrol

Wed May 21 19:26:09 GMT 2003 MKIV Start Cal

Wed May 21 19:26:27 GMT 2003 CHIP Start Patrol

Wed May 21 19:26:38 GMT 2003 PICS Start Patrol

COMMENT: Wed May 21 19:26:59 GMT 2003

Guider wasn't quite centered when I restarted everything.

Wed May 21 19:45:47 GMT 2003 MKIV End Cal

\*\*PSPT PROBLEM\*\* : Wed May 21 20:02:03 GMT 2003

Voltages are OK at motor as far as 115V when direction and limit switches are concerned. There is a residual 60-70 V on the neutral. Suspect bad capacitor.

\*\*PSPT PROBLEM\*\* : Wed May 21 20:34:27 GMT 2003

Found the problem to the new motor not starting. Starting capacitor, Dayton part number CAP 4X060, an Aero M 145-174 MFD 110/125 VAC capacitor, blew its coolant or insulating compound out into the junction box next to the motor. Removed the capacitor and cleaned out some of the gunk from the wires and the inside of the box.

Wed May 21 21:06:44 GMT 2003 MKIV Start Patrol

\*\*MKIV PROBLEM\*\* : Wed May 21 21:06:49 GMT 2003

Forgot to restart mk4 after calibration. Sorry, preoccupied with PSPT repair.

MKIV COMMENT: Wed May 21 21:33:21 GMT 2003

Centered O1

COMMENT: Wed May 21 21:36:16 GMT 2003

Talked to Bunny and we got kaiee to respond to mail again.

COMMENT: Wed May 21 22:23:25 GMT 2003

At an awkward dome slot configuration, instruments may get domed out occasionally.

\*\*PSPT PROBLEM\*\* : Wed May 21 23:25:57 GMT 2003

Located local vendor for replacement starting capacitor, ~ \$9.00.

I'll go down and pick one up either this afternoon or tomorrow.

MKIV COMMENT: Wed May 21 23:29:18 GMT 2003

Centered O1.

WEATHER COMMENT: Thu May 22 01:03:17 GMT 2003

In thin cirrus.

Thu May 22 02:42:26 GMT 2003 CHIP End Patrol

Thu May 22 02:43:50 GMT 2003 PICS End Patrol

Thu May 22 02:47:46 GMT 2003 MKIV End Patrol

\*\*MKIV PROBLEM\*\* : Thu May 22 02:46:11 GMT 2003

Took down the shutter drive assembly and worked on removing some binding I could feel when turning the gears manually via the hook. Took drive apart on the ground, lubed the drier parts and reassembled it. The binding appeared gone. Re-mounting of the drive is incomplete. Will finish the job next chance. The hard part of mounting the assembly at the top of the dome is done.

COMMENT: Thu May 22 02:49:49 GMT 2003

All instruments got domed out because of cable/hose stretching at some point at around 0225 UT.

Thu May 22 02:57:14 GMT 2003

MkIV

00_02.rawmk4	01_37.rawmk4	17_28.rawmk4	19_12.rawmk4	22_31.rawmk4
00_05.rawmk4	01_39.rawmk4	17_30.rawmk4	19_15.rawmk4	22_34.rawmk4
00_08.rawmk4	01_42.rawmk4	17_33.rawmk4	19_29.rawmk4	22_37.rawmk4
00_11.rawmk4	01_45.rawmk4	17_36.rawmk4	19_42.rawmk4	22_40.rawmk4
00_14.rawmk4	01_48.rawmk4	17_39.rawmk4	21_06.rawmk4	22_43.rawmk4
00_17.rawmk4	01_51.rawmk4	17_42.rawmk4	21_09.rawmk4	22_46.rawmk4
00_20.rawmk4	01_54.rawmk4	17_45.rawmk4	21_12.rawmk4	22_49.rawmk4
00_23.rawmk4	01_57.rawmk4	17_48.rawmk4	21_15.rawmk4	22_52.rawmk4
00_26.rawmk4	02_00.rawmk4	17_51.rawmk4	21_18.rawmk4	22_55.rawmk4
00_29.rawmk4	02_03.rawmk4	17_54.rawmk4	21_21.rawmk4	22_58.rawmk4
00_32.rawmk4	02_06.rawmk4	17_57.rawmk4	21_24.rawmk4	23_01.rawmk4
00_35.rawmk4	02_09.rawmk4	18_00.rawmk4	21_27.rawmk4	23_04.rawmk4
00_38.rawmk4	02_12.rawmk4	18_03.rawmk4	21_30.rawmk4	23_07.rawmk4
00_41.rawmk4	02_15.rawmk4	18_06.rawmk4	21_33.rawmk4	23_09.rawmk4
00_44.rawmk4	02_18.rawmk4	18_09.rawmk4	21_36.rawmk4	23_12.rawmk4
00_47.rawmk4	02_21.rawmk4	18_12.rawmk4	21_39.rawmk4	23_15.rawmk4
00_49.rawmk4	02_24.rawmk4	18_15.rawmk4	21_41.rawmk4	23_18.rawmk4
00_52.rawmk4	02_26.rawmk4	18_17.rawmk4	21_44.rawmk4	23_21.rawmk4
00_55.rawmk4	02_29.rawmk4	18_20.rawmk4	21_47.rawmk4	23_24.rawmk4
00_58.rawmk4	02_32.rawmk4	18_23.rawmk4	21_50.rawmk4	23_27.rawmk4
01_01.rawmk4	02_35.rawmk4	18_26.rawmk4	21_53.rawmk4	23_30.rawmk4
01_04.rawmk4	02_38.rawmk4	18_32.rawmk4	21_56.rawmk4	23_33.rawmk4
01_07.rawmk4	02_41.rawmk4	18_36.rawmk4	21_59.rawmk4	23_36.rawmk4
01_10.rawmk4	02_44.rawmk4	18_39.rawmk4	22_02.rawmk4	23_39.rawmk4
01_13.rawmk4	16_43.rawmk4	18_42.rawmk4	22_05.rawmk4	23_42.rawmk4
01_16.rawmk4	16_46.rawmk4	18_45.rawmk4	22_08.rawmk4	23_45.rawmk4
01_19.rawmk4	17_03.rawmk4	18_48.rawmk4	22_11.rawmk4	23_48.rawmk4
01_22.rawmk4	17_06.rawmk4	18_51.rawmk4	22_14.rawmk4	23_51.rawmk4
01_25.rawmk4	17_12.rawmk4	18_57.rawmk4	22_17.rawmk4	23_54.rawmk4
01_28.rawmk4	17_16.rawmk4	19_00.rawmk4	22_20.rawmk4	23_56.rawmk4
01_31.rawmk4	17_19.rawmk4	19_03.rawmk4	22_23.rawmk4	23_59.rawmk4
01_32.rawmk4	17_22.rawmk4	19_06.rawmk4	22_25.rawmk4	c19_26.rawmk4
01_34.rawmk4	17_25.rawmk4	19_09.rawmk4	22_28.rawmk4	c19_39.rawmk4